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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/696,169A

DATE: 05/16/2002

TIME: 16:04:11

Input Set : A:\new1614-0244P.ST25.txt

Output Set: N:\CRF3\05162002\I696169A.raw

3 <110> APPLICANT: VALENTA, Rudolf et al.

5 <120> TITLE OF INVENTION: NON-ANAPHYLACTIC FORMS OF GRASS POLLEN PH1 P 6 ALLERGEN AND
THEIR USE

7 <130> FILE REFERENCE: 1614-0244p

9 <140> CURRENT APPLICATION NUMBER: 09/696,169A

C--> 10 <141> CURRENT FILING DATE: 2002-05-06

12 <160> NUMBER OF SEQ ID NOS: 21

14 <170> SOFTWARE: PatentIn version 3.0

16 <210> SEQ ID NO: 1

17 <211> LENGTH: 29

18 <212> TYPE: DNA

19 <213> ORGANISM: Artificial Sequence

21 <220> FEATURE:

22 <223> OTHER INFORMATION: Primer derived from Phleum pratense

24 <400> SEQUENCE: 1

25 gggaattcca tatggggaag gccacgacc 29

28 <210> SEQ ID NO: 2

29 <211> LENGTH: 45

30 <212> TYPE: DNA

31 <213> ORGANISM: Artificial Sequence

33 <220> FEATURE:

34 <223> OTHER INFORMATION: Primer derived from Phleum pratense

36 <400> SEQUENCE: 2

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40 <210> SEQ ID NO: 3

41 <211> LENGTH: 29

42 <212> TYPE: DNA

43 <213> ORGANISM: Artificial Sequence

45 <220> FEATURE:

46 <223> OTHER INFORMATION: Primer derived from Phleum pratense

48 <400> SEQUENCE: 3

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52 <210> SEQ ID NO: 4

53 <211> LENGTH: 45

54 <212> TYPE: DNA

55 <213> ORGANISM: Artificial Sequence

57 <220> FEATURE:

58 <223> OTHER INFORMATION: Primer derived from Phleum pratense

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65 <211> LENGTH: 4

66 <212> TYPE: PRT

67 <213> ORGANISM: Phleum pratense

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72 1
74 <210> SEQ ID NO: 6
75 <211> LENGTH: 4
76 <212> TYPE: PRT
77 <213> ORGANISM: Phleum pratense
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81 Lys Ala Thr Thr
82 1
84 <210> SEQ ID NO: 7
85 <211> LENGTH: 4
86 <212> TYPE: PRT
87 <213> ORGANISM: Phleum pratense
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91 Lys Tyr Lys Thr
92 1
94 <210> SEQ ID NO: 8
95 <211> LENGTH: 138
96 <212> TYPE: PRT
97 <213> ORGANISM: Phleum pratense
99 <400> SEQUENCE: 8
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102 1 5 10 15
105 Val Leu Gly Leu Ala Thr Ser Pro Thr Ala Glu Gly Gly Lys Ala Thr
106 20 25 30
109 Thr Glu Glu Gln Lys Leu Ile Glu Asp Val Asn Ala Ser Phe Arg Ala
110 35 40 45
113 Ala Met Ala Thr Thr Ala Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr
114 50 55 60
117 Phe Glu Ala Ala Phe Thr Val Ser Ser Lys Arg Asn Leu Ala Asp Ala
118 65 70 75 80
121 Val Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn
122 85 90 95
125 Ala Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu
126 100 105 110
129 Ala Phe Val Leu His Phe Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr
130 115 120 125
133 Pro Glu Val His Ala Val Lys Pro Gly Ala
134 130 135
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145 atgttcctcg ctgttgccgt tgtgttgggc ttggccacat ccccaactgc agagggaggg 120
147 aaggccacga ccgaggagca aaaattgatc gaggacatca atgccagctt tagggcggcc 180
149 atggccacca ctgctaacgt ccctccagca gacaagtata agacattcga agccgccttc 240

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151 acggtgtcct caaagagaaa cctcgtgac gccgtttcaa aggcgccccca gctggtcccc 300
153 aagctcgatg aagtctacaa cgccgcctac aatgctgccg atcatgccgc cccagaagac 360
155 aagtatgaag ccttcgtcct tcaacttttc gaggtctcc acatcatcgc cggtagcccc 420
157 gaggtccacg ctgtcaagcc cggcgcgtag ttgttcagca cggccaagat ccttgacagc 480
159 gtcgctgcca cgggcgtgc agccaacact gccagtggct aaaaaattcg actagctcct 540
161 tcatacaatg aatacacatg tatcattcaa acatactact gtacagtatg tgcattgacct 600
163 agcggcgagc atttttttta tgattaatct ttatacatg ggcgtgatcg agcgtgtgca 660
165 tatgtgtaat aattaatttt ttattttgat ttgaaattgt aatcctgata agaaatgcga 720
167 ttaagtccat ttatgaaaaa aaaaaaaaaa 750
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172 <212> TYPE: DNA
173 <213> ORGANISM: Phleum pratense
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178 ccgttgtgtt gggcttgcc acatcccaa ctgcagagg aggaaggcc acgaccgagg 120
180 agcaaaaatt gattgaggac gtcaatgcca gctttagggc ggcatggcc accactgcta 180
182 acgtccctcc agcagacaag tataagacat tcgaagccgc cttcacggtg tcctcaaaga 240
184 gaaacctcgc tgacgccgtt tcaaaggcgc cccagctggt cccaagctc gatgaagtct 300
186 acaacgccgc ctacaatgct gccgatcatg ccgcccaga agacaagtat gaagccttcg 360
188 tccttcactt ttccgaggct ctccgtatca tcgccgttac ccccgagggt cacgctgtca 420
190 agcccgccgc gtagttgttc agcacggtca agatccttga cagcgtcgt gccaccggcg 480
192 ctgcagccaa cactgccagt ggctaaaaaa ttcgactagc tccttcatac aatgaataca 540
194 catgtatcat tcaaaaaaaa aaaaaaaaaa a 571
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199 <212> TYPE: DNA
200 <213> ORGANISM: Phleum pratense
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205 actgctaacy tccctccagc agacaagtat aagacattag aagccgcctt cacggtgtcc 120
207 tcaaagagaa acctcgtga cgccgtctca aaggcgcccc agctcgtccc caagctcgat 180
209 gaagtctaca acgcgccta caatgctgcc gatcatgcc cccagaaga caagtatgaa 240
211 gccttcgtcc ttacttttc cgaggctctc cgtatcatcg ccgtacccc cgaggteccac 300
213 gctgtcaagc cgggcgcgta gttgttcagc acggtcaaga tccttgacag cgtcgtgccc 360
215 accggtgctg cagccaacac tgccagtggc taaaaagttc gaccagctct ttcatacaat 420
217 gaatacacat gtatctttca aacatactac tgtacagtat gtgcatgacc tagcggcgag 480
219 cttttttttt atgattaatc ttttatacat gggcgtgatc gagcgtgtgc atatgtgtaa 540
221 taattaattt cttattttga tttgaaattg taatcctgat aagaaatgcg attaagtcca 600
223 tttatgaaat atagatggtc cgtcgttatt taaaaaaaaa aaaaaaa 647
226 <210> SEQ ID NO: 12
227 <211> LENGTH: 572
228 <212> TYPE: DNA
229 <213> ORGANISM: Phleum pratense
231 <400> SEQUENCE: 12
232 gcagacaagt ataagacatt cgaagccgcc ttcacggtgt cctcaaagag aaacctcgtc 60
234 gacgccgttt caaaggcgcc ccagctggtc cccaagctcg atgaagtcta caacgccgcc 120
236 tacaatgctg ccgatcatgc cgcccagaa gacaagtatg aagccttcgt cttcacttt 180
238 tccgaggctc tccacatcat cgccggtacc cccgaggctc acgctgtcaa gcccggcgcg 240

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240 tagttgttca gcacgggtcaa gataccttgac agcgtcgtcg ccaccgggcgc tgcagccaac 300
242 actgccagtg gctaaaaaat tcgactagct ccttcataca atgaatacac atgtatcatt 360
244 caaacatact actgtacagt atgtgcatga cctagcggcg agcatttttt ttatgattaa 420
246 tctttttatac atgggcgtga tcgagcgtgt gcatatgtgt aataattaat tttttatttt 480
248 gatttgaaat tgtaatcctg ataagaaatg cgattaagtc catttaaaaa aaaaaaaaaa 540
250 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 572
253 <210> SEQ ID NO: 13
254 <211> LENGTH: 474
255 <212> TYPE: DNA
256 <213> ORGANISM: Phleum pratense
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261 gccgatcatg ccgccccaga agacaagtat gaagccttcg tccttcactt ttccgaggct 120
263 ctccacatca tcgcccgtac ccccagggtc cacgctgtca agcccggcgc gtagttgttc 180
265 agcacgggtc agatccttga cagcgtcgtc gccaccggcg ctgcagccaa cactgccagt 240
267 ggctaaaaaa ttgactagc tccttcatac aatgaataca catgtatcat tcaaacatac 300
269 tactgtacag tatgtgcatg acctagcggc gagcattttt tttatgatta atcttttata 360
271 catgggcgtg atcgagcgtg tgcatatgtg taataattaa ttttttattt tgatttgaaa 420
273 ttgtaatcct gataagaaat gcgattaagt ccatttatga aaaaaaaaaa aaaa 474
276 <210> SEQ ID NO: 14
277 <211> LENGTH: 554
278 <212> TYPE: DNA
279 <213> ORGANISM: Phleum pratense
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284 gccccagaag acaagtatga agccttcgtc cttcactttt ccgaggctct ccacatcatc 120
286 gccggtaccc ccgagggtcca cgctgtcaag cccggcgcgt agttgttcag cacggtcaag 180
288 atccttgaca gcgtcgtcgc caccggcgtc gcagccaaca ctgccagtgg ctaaaaaatt 240
290 cgactagctc cttcatacaa tgaatacaca tgtatcattc aaacatacta ctgtacagta 300
292 tgtgcatgac ctagcggcga gcattttttt tatgattaat cttttataca tgggcgtgat 360
294 cgagcgtgtg catatgtgta ataattaatt ttttattttg atttgaaatt gtaatcctga 420
296 taagaaatgc gattaagtcc atttatgaaa tatagatggt ctgtcgttat ttaaaaaaaaa 480
298 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 540
300 aaaaaaaaaa aaaa 554
304 <210> SEQ ID NO: 15
305 <211> LENGTH: 138
306 <212> TYPE: PRT
307 <213> ORGANISM: Phleum pratense
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312 1 5 10 15
315 Val Leu Gly Leu Ala Thr Ser Pro Thr Ala Glu Gly Gly Lys Ala Thr
316 20 25 30
319 Thr Glu Glu Gln Lys Leu Ile Glu Asp Ile Asn Ala Ser Phe Arg Ala
320 35 40 45
323 Ala Met Ala Thr Thr Ala Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr
324 50 55 60
327 Phe Glu Ala Ala Phe Thr Val Ser Ser Lys Arg Asn Leu Ala Asp Ala
328 65 70 75 80

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331 Val Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn
332      85      90      95
335 Ala Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu
336      100     105     110
339 Ala Phe Val Leu His Phe Ser Glu Ala Leu His Ile Ile Ala Gly Thr
340      115     120     125
343 Pro Glu Val His Ala Val Lys Pro Gly Ala
344      130     135
347 <210> SEQ ID NO: 16
348 <211> LENGTH: 138
349 <212> TYPE: PRT
350 <213> ORGANISM: Phleum pratense
352 <400> SEQUENCE: 16
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355 1      5      10      15
358 Val Leu Gly Leu Ala Thr Ser Pro Thr Ala Glu Gly Gly Lys Ala Thr
359      20      25      30
362 Thr Glu Glu Gln Lys Leu Ile Glu Asp Val Asn Ala Ser Phe Arg Ala
363      35      40      45
366 Ala Met Ala Thr Thr Ala Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr
367      50      55      60
370 Phe Glu Ala Ala Phe Thr Val Ser Ser Lys Arg Asn Leu Ala Asp Ala
371 65     70     75     80
374 Val Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn
375      85      90      95
378 Ala Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu
379      100     105     110
382 Ala Phe Val Leu His Phe Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr
383      115     120     125
386 Pro Glu Val His Ala Val Lys Pro Gly Ala
387      130     135
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391 <211> LENGTH: 106
392 <212> TYPE: PRT
393 <213> ORGANISM: Phleum pratense
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401 Ala Met Ala Thr Thr Ala Asn Val Pro Pro Ala Asp Lys Tyr Lys Thr
402      20      25      30
405 Leu Glu Ala Ala Phe Thr Val Ser Ser Lys Arg Asn Leu Ala Asp Ala
406      35      40      45
409 Val Ser Lys Ala Pro Gln Leu Val Pro Lys Leu Asp Glu Val Tyr Asn
410      50      55      60
413 Ala Ala Tyr Asn Ala Ala Asp His Ala Ala Pro Glu Asp Lys Tyr Glu
414 65     70     75     80
417 Ala Phe Val Leu His Phe Ser Glu Ala Leu Arg Ile Ile Ala Gly Thr
418      85      90      95
421 Pro Glu Val His Ala Val Lys Pro Gly Ala

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/696,169A

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TIME: 16:04:12

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